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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,763	12/28/2001	Alex Horng	HORN3083/EM	4313
7590	07/15/2004			
Bacon & Thomas 625 Slaters Lane-4th Floor Alexandria, VA 22314			EXAMINER SMITH, JULIE KNECHT	
			ART UNIT 3682	PAPER NUMBER
DATE MAILED: 07/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/028,763	Applicant(s) HORNG ET AL.	
	Examiner Julie K Smith	Art Unit 3682	<i>NW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (4,712,031) in view of Shy (6,024,496).

Regarding claim 1, Anderson discloses a bearing comprising a shaft seat (71) having a bearing (38) provided therein, and a rotation shaft (13) rotatably mounted in the bearing, the improvement comprising a race (53) formed with a hole fitting tightly on the rotation shaft, located above the bearing (see fig. 3), for rotation with the shaft, and a circumferential edge of the race is almost in contact with the inner wall of the shaft seat. A washer (57) is mounted on the rotation shaft between a race and a bearing. Anderson does not disclose the race being made of an elastic material. However, Shy teaches an elastic race (94) for sealing a bearing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the race of Anderson with the teachings of Shy to provide an elastic race, instead of an aluminum race, so that the race will be able to flex during rotation of the shaft, providing a more effective seal against leaks.

Regarding claim 2, Anderson discloses a bearing assembly, as claimed, but lacks an annular groove for connecting a snap member. However, Shy teaches a rotating shaft having an annular groove (17) for holding a snapping connection of a snap member (21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bearing of the reference combination set forth above with the teachings of Shy so as to secure the shaft within the bearing and prevent it from becoming detached.

3. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Shy as applied to claims 1 and 2 above, and further in view of Lowe (3,359,048).

Regarding claims 4-8, the reference combination set forth above comprises a bearing, but the bearing lacks the specific shape, as claimed. However, Lowe teaches a bearing wherein the thickness of the mediate portion of the race is gradually tapered toward the circumferential edge of the race (see fig. 1) and mounted on an edge of the mediate portion of the race in an annular manner.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bearing of the reference combination set forth above with the teachings of Lowe so as to provide a more effective seal against dust and oil.

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*Response to Arguments*

4. Applicant's arguments, filed 3/30/04, with respect to the rejection(s) of claim(s) 1-8 under Muto et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Anderson.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie K. Smith whose telephone number is 703-305-3948. The examiner can normally be reached on Monday-Friday, 8-5:30, (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jks

July 12, 2004

  
DAVID A. BUCCI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600